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AMENDMENT

Please replace paragraph 3 with the following:

[0003] Electronics associated with the imaging system have been placed in the ultrasound probe housing. For example, U.S. Patent No. 5,590,658 discloses a hand-held probe housing in which the ultrasonic transducers and beam forming circuitry are housed. As another example, U.S. Published Patent Application No. 20040002652 (U.S. Application Serial No. 10/184,461), the disclosure of which is incorporated herein by reference, discloses integrating a multiplexer and other electronics in the hand-held ultrasound transducer probe housing. Signals from a plurality of transducer elements are time division multiplexed onto a few number of cables for transmission to the ultrasound imaging system. In another ultrasound transducer probe assembly, a controller for a wobbler transducer is positioned in the connector housing for controlling the motor of the wobbler array in the probe housing.

Please replace paragraph 27 with the following:

[0027] In an alternative embodiment, the transducer array 32 electrically connects to electrical components 34 within the probe housing 16. For example, the probe electronics 34 include a multiplexer electrically connected between the plurality of cables of the cable 18 and the transducer elements of the array 32. The multiplexer is positioned in the transducer probe housing 16 with the array 32. The multiplexer is operable to multiplex signals from a plurality of elements onto a fewer number of outputs using time division multiplexing. In alternative embodiments, other forms of multiplexing are provided. Preamplifiers or other structures are also included in other embodiments with the multiplexer. For example, the structures disclosed in U.S. Published Patent Application Nos. 20040002652 and 20030139671 and (U.S. Serial Numbers 10/184,461 and 10/341,871), the disclosures of which are incorporated herein by reference, are used. For a multidimensional array, signals from every 2, 4, 8 or other number of elements are multiplexed onto a common output. A plurality of outputs for different groups of elements is provided. In alternative embodiments, the probe electronics 34 are different components for the same or different functions, or the transducer probe housing 16 is provided without the

further electronics 34. In another embodiment, the probe electronics 34 include delays, amplifiers and summers for performing beamforming functions for sub-arrays or across the entire array.

**Please replace paragraph 51 with the following:**

[0051] While the invention has been described above by reference to various embodiments, it should be understood that many changes and modifications can be made without departing of the scope of the invention. For example, any of the components, schemes, embodiments or other features disclosed in U.S. Published Patent Application No. 20050148873 \_\_\_\_\_  
~~(Application Serial No. \_\_\_\_\_ (Attorney Ref. No. 2003P14535US))~~, filed herewith, the disclosure of which is incorporated by reference, may be used for or with analog-to-digital conversion and/or compression. It is therefore intended that the foregoing detailed description be regarded as illustrative rather than limiting and that it is the following claims, including all equivalents, which are intended to define the spirit and the scope of this invention.